

Little Rock School District

2012-13 Grade 3 Mathematics Curriculum Map

Common Core State Standards (CCSS)

Unit 2

Curriculum Overview

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Aug 20-Sept 14 (19 days)	Sept 17 - Oct 12 (20 days)	Oct 15 - Nov 20 (23 days)	Nov 26-Jan 11 (23 days)	Jan 14-Feb 8 (19 days)	Feb 11-Mar 15 (23 days)	Mar 25-Apr 5 (9 days)	Apr 8-June 5 (37 days)
Numbers and Operations in Base Ten	Operations and Algebraic Thinking: The Relationship between Multiplication and Division	Operations and Algebraic Thinking: The Properties of Multiplication and Division	Operations and Algebraic Thinking: Patterns in Addition and Multiplication	Geometry	Numbers and Operations- Fractions: Representing and Comparing Fractions	Measurement and Data	Gap Lessons for
		SOAR Oct 17-18	SOAR Dec 12-13		SOAR Feb 27-28		ACTAAP April 8-12
<ul style="list-style-type: none"> ○ 3.NBT.1 ○ 3.NBT.2 ○ 3.NBT.3 ● 3.MD.3 ● 3.MD.4 	<ul style="list-style-type: none"> ★ 3.OA.1 ★ 3.OA.2 ★ 3.OA.3 ★ 3.OA.4 ● 3.MD.3 ● 3.MD.4 	<ul style="list-style-type: none"> ★ 3.OA.5 ★ 3.OA.6 ★ 3.OA.7 ● 3.MD.3 ● 3.MD.4 	<ul style="list-style-type: none"> ★ 3.OA.8 ★ 3.OA.9 ● 3.MD.4 ● 3.MD.5 ★ 3.MD.6 ★ 3.MD.7 	<ul style="list-style-type: none"> ● 3.G.1 ● 3.G.2 ● 3.MD.3 ● 3.MD.4 	<ul style="list-style-type: none"> ★ 3.NF.1 ★ 3.NF.2 ★ 3.NF.3 ● 3.MD.3 ● 3.MD.4 	<ul style="list-style-type: none"> ★ 3.MD.1 ★ 3.MD.2 ● 3.MD.3 ● 3.MD.4 ★ 3.MD.7 ○ 3.MD.8 	
Standards for Mathematical Practice should be included in <u>every unit</u> throughout the year.							
OA=Operations and Algebraic Thinking, NBT=Number and Operations in Base Ten, NF=Number and Operations, Fractions, G=Geometry, MD=Measurement and Data ★ Major Standard ● Supporting Standard ○ Additional Standard							

Sept 17 - Oct 12
(20 days)

Unit 2: Represent and solve problems involving multiplication and division

CONTENT STANDARDS

PRACTICE STANDARDS

DOMAIN – OPERATIONS AND ALGEBRAIC THINKING

CLUSTER	Represent and solve problems involving multiplication and division.	1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i>
		2. Interpret whole-number quotients of whole numbers, e.g. interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</i>
		3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \square \div 3$, $6 \times 6 = ?$.</i>
		3.OA.1 3.OA.2 3.OA.3 3.OA.4

Practice standards are embedded in every lesson throughout the curriculum, although not every practice will be found in every lesson. Numbers 1 and 6 should be evident in every lesson, and the other practices should be embedded as is appropriate to the lesson content and structure.

1. **Make sense of problems and persevere in solving them.**
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. **Attend to precision**
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

Categorizing the Practice Standards

Habits of Mind
1 and 6
Reasoning/Explaining
2 and 3
Modeling/Using Tools
4 and 5
Structure/Generalizing
7 and 8

Sept 17 - Oct 12
(20 days)

Unit 2 Represent and interpret data

DOMAIN – MEASUREMENT AND DATA

CLUSTER	Represent and interpret data	3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>
		4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters.

3.MD.3
3.MD.4

Sept 17 - Oct 12 (20 days)	Unit 2: The Relationship between Multiplication and Division			Vocabulary
	Rationale	Background	Essential Questions	Misconceptions
WORKSHOP MODEL OF INSTRUCTION				
Warm up	WORKTIME Lessons			CLOSURE
<p>Number Talks: http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/Number+Talks.pdf</p> <p>Thinking Devices: Search Teacher Tube and other teacher friendly sites for related videos.</p> <p>Quick Estimation: List a series of numbers on the board and have students quickly try to find the answer using estimation. Ex. Find the answer to the nearest $539 + 682 + 459 = 1700$</p>	<p>Pre-Assessment</p> <p>Lesson 1: Investigations ~ Many Things Come in Groups (graphing is embedded in this unit – so this is a good place to have students create, read and interpret graphs). http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/ManyThingsComeInGroups+3rd+grade+map.pdf</p> <p>Lesson 2: Harcourt Ch. 8 – Check what you know p. 157. Then Lesson 1 p. 158- Equal Groups</p> <p>Lesson 3: Harcourt Ch. 8 – Lesson 2 p. 160 (2's and 5's)</p> <p>Lesson 4: Teach Multiplication Pile Up http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/Multiplication+Pile-Up.pdf</p> <p>Lesson 5: Present a problem.</p> <p>Lesson 6: Graphing and Data: Teacher choice of data and graphing activity</p> <p>Lesson 7: Investigations 100s charts skip counting by 2, 5, and 10 (only). http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/3rdHighlightingMultiplesin100Charts.pdf</p> <p>Lesson 8: Workstation or Partner Games (small groups or observations). Students can play Multiplication Pile up or any of the games from unit 1. REMEMBER: Students need to play same games over and over all year to develop fluency.</p> <p>Lesson 9: Investigations: Arranging Chairs http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/ArrangingChairs+3rd+grade.pdf</p> <p>Lesson 10: Harcourt Ch. 8 p. 162 (Arrays)</p> <p>Lesson 11: Teach Circles and Stars http://lrsd3rdgrademathmap2012-13.wikispaces.com/file/view/Circles+and+Stars+game.pdf</p>			<p>Closure options</p> <ul style="list-style-type: none"> ▪ Gallery walk ▪ Student Discussion <p>Open-ended Questions/Talk Moves</p> <ul style="list-style-type: none"> ▪ Unit Question Bank ▪ Talk Moves <p>Journal Prompts</p> <ul style="list-style-type: none"> ▪ Unit Journal Prompt Suggestions <p>Exit Ticket Ideas</p> <ul style="list-style-type: none"> ▪ 'Say Why' ▪ Estimation task

<p>Dot Cards http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/Dot+Cards+8+Per+Page.pdf</p>	<p>Lesson 12: Work Stations or Partner Games</p> <p>Lesson 13: Present a problem or have students write a problem to go with specific number sentences. <i>For example: Teacher presents the naked number sentence: 5×2</i> <i>Students might write: Terrie, Cheryl, Sadie, Mila and Kristi all went to the convenience store. Each of them bought two items. How many items did the girls buy?</i></p> <p>Lesson 15: Graphing and Data: Teacher choice of data and graphing activity.</p> <p>Lesson 14: Investigations Make Array Cards-these will go into workstations. http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/3rdMakingArrayCards.pdf</p> <p>Lesson 16: Teach Where the Lines Cross http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/Where+the+Lines+Cross.pdf</p> <p>Lesson 17: Work Stations</p> <p>Lesson 18: Present a Problem or have students write a problem to go with specific number sentences.</p>	
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OTHER RESOURCES

ASSESSMENT	INTERVENTIONS	HOMEWORK IDEAS
<p>Formative Assessment</p> <ul style="list-style-type: none"> Class Play from Performance Assessment Book Directions PA19 Task PA21 and Rubric PA20 <p>Summative Assessment</p> <ul style="list-style-type: none"> Daisy Garden from Performance Assessment Book Directions PA28 Task PA30 and Rubric PA29 	<ul style="list-style-type: none"> Number Bonds can be adapted to multiplication or division as well as addition and subtraction for additional practice http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/Number+Bonds.pdf Open ended sentences can also be adapted to multiplication and division as well as addition and subtraction for practice http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/True%2C+False+and+Open+Sentences.pdf 	<ul style="list-style-type: none"> Harcourt Problem Solving Book PS47 Harcourt Challenge Book CW47 Harcourt Problem Solving Book PS 49 Harcourt Reteach Book RW49 Problem Solving Problems http://lr3rdgrademathmap2012-13.wikispaces.com/file/view/Unit+2+Home+work.doc